Remarks

The Applicant respectfully requests reconsideration of this application in view of the amendments and the following remarks. In this response, claims 1-14 have been cancelled, without prejudice and thirty-seven (37) new claims, i.e., claims 19-55 have been added to clarify various distinguishing features of the invention. Hence, upon entry of this amendment, claims 19-55 are presented for examination.

Claim Rejections – 35 U.S.C. §103
Ayandeh in view of Rao and further in view of Reichmeyer

In the Office action, the Examiner rejected claims 1-14 under 35 U.S.C. §103(a) for allegedly being unpatentable over US Patent No. 6,069,895 of Ayandeh (hereafter "**Ayandeh**") in view of US Patent No. 6,674,756 of Rao (hereafter "**Rao**") and further in view of US Patent No. 6,286,038 of Reichmeyer (hereafter "**Reichmeyer**"). The undersigned respectfully disagrees with the Examiner's characterization of the teachings and/or applicability of the references relied upon individually and in combination to the claims and points out several distinctions between the claimed subject matter and the proposed combination.

As presently understood by the undersigned, Ayandeh generally relates to a mechanism for distributing packet routing decision-making by copying ***routing tables*** to intelligent line-cards (see Abstract). In the context of Ayandeh, a switching node comprises one processing unit (e.g., the route server element (RSE) or central controller 46) and multiple intelligent line-cards 48. In order to offload the RSE, ***Ayandeh suggests distributing routing tables to the line cards to allow them to perform routing independent of the RSE***. As a result, a packet received by one of Ayandeh's intelligent line-cards can be transferred to the appropriate egress line-card (having an interface with the appropriate adjacent node) over the switch fabric 42 based on a local routing decision made by the ingress line-card. Importantly, Ayandeh does not contain any teaching with respect to **generating routing configurations** (automatic or otherwise) **or provisioning of virtual routers**.

As presently understood by the undersigned, Rao generally relates to a physical network switch that may be partitioned into multiple virtual routers among

which switch resources may be flexibly and dynamically allocated (see Abstract); however Rao's ***manual configuration process*** (see col. 19, ll. 44-52) is an example of the problem being addressed by the profile-driven approach of various embodiments of the present invention.

As presently understood by the undersigned and explained in the remarks accompanying the RCE filed November 15, 2004, Reichmeyer makes no mention of "virtual routers" or the configuration thereof. While, Reichmeyer does generally relate to remotely configuring a network device, Reichmeyer clearly does not involve configuring a virtual router for participation in a customer VPN and clearly does not involve a profile-driven approach.

Briefly and by way of background (without reference to any particular claim), various embodiments of the present invention involve a ***profile-driven approach for configuring customer virtual private networks*** (VPNs). Based on a custom routing profile provided by a customer network management system (e.g., customer network management system 106 in Fig. 1), a service management system (e.g., service management system 118 in Fig. 1) associated with a service provider programmatically generates appropriate routing configurations for customer VRs (e.g., Customer VR A 206.A, Customer VR B 206.B and Customer VR C 206.C in Fig. 2) based on site reachability data and the custom routing profile.

As an initial matter before turning to specific language of the pending claims, the undersigned would like to point out there is no perceived motivation to combine the disparate teachings of Ayandeh, Rao and Reichmeyer. All certainly relate to networking generally; however, Ayandeh has no relationship to generating routing configuration and makes no reference to virtual routers or VPNs, ***Rao*** does acknowledge virtual routers, but ***teaches away*** from automatically generating routing configuration data by suggesting the system administrator should "perform routing configurations for the VRs" and Reichmeyer makes no mention of VRs or VPNs.

Turning now to the specific language of the pending claims, regarding new independent claim 19, to the extent properly combinable, the proposed combination of Ayandeh, Rao and Reichmeyer, does not teach or reasonably suggest performing the profile-driven routing configuration approach required. For example, claim 19 expressly

recites "***receiving*** at a service management system associated with the service provider ***from a customer network management system*** associated with the first customer, ***a custom routing profile associated with the customer VPN***, the custom routing profile identifying a first routing protocol to be used for the plurality of intra-VPN segments and a second routing protocol to be used for the plurality of edge segments." The only reference, Reichmeyer, that even remotely involves configuration of network devices suggests using information obtained from network devices, such as a pre-configuration file 66 (also referred to as a "cookie") or information related to the physical and logical configuration of the device learned by a 'Neighbor discovery' procedure, to assist with the generation of configuration information (see Fig. 3, Fig. 5 and col. 5, l. 43 – col. 6, l. 17). Consequently, the Reichmeyer configuration process involves neither a customer network management system nor a custom routing profile associated with the customer VPN. In fact, a customer appears to have no ability to influence or customize the information upon which the Reichmeyer configuration process is based.

Furthermore, the combination of Ayandeh, Rao and Reichmeyer are deficient with respect to "the system management system ***automatically configuring the customer VPN by (i) programmatically generating appropriate routing configurations for the customer VRs based on*** the set of site reachability data and ***the custom routing profile*** and (ii) provisioning the customer VRs" as expressly recited (emphasis added). As noted above, Reichmeyer does not involve a custom routing profile. With respect to Ayandeh and Rao, as indicated above, neither are thought to address the topic of automatically or programmatically generating routing configurations based on a custom profile or otherwise. Importantly, it should be apparent from the references previously of record and those submitted concurrently herewith as part of an Information Disclosure Statement that ***routing configurations are not routing tables***. Routing configuration data may include, among other things, settings and/or values for the configurable options associated with (i) the numerous protocols implemented by routers, (ii) interfaces, (iii) access control lists, (iv) QoS mechanisms and (v) other services and routing parameters; whereas routing tables are tables that store and updates the locations (addresses) of network devices. Therefore, copying a routing table from the route server element to various line-cards as suggested in Ayandeh cannot be equated with provisioning of

customer VRs as claimed. For at least these reasons, claim 19 and its dependent claims, which add further limitations, are thought to be clearly distinguishable over the Examiner's proposed combination of Ayandeh, Rao and Reichmeyer.

Regarding new independent claim 32, it includes limitations similar to those discussed with reference to claim 19. Consequently, claim 32 and its dependent claims are thought to be distinguishable for at least various of the reasons pointed out with reference to claim 19.

Conclusion

Applicant respectfully submits that the amendments and remarks presented herein have overcome the rejections, and that the pending claims are in condition for allowance. Accordingly, Applicant requests that the rejections be withdrawn and that a Notice of Allowance be promptly issued for claims 19-55.

Request for a Telephone Interview

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-284-5103.

Respectfully submitted,

HAMILTON, DESANCTIS & CHA

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